

**Abstract**

The present invention relates to the diol intermediate of citalopram useful for treatment of  
5 depression, which is the crystal of free base of  
3-hydroxymethyl-4-[1-(4-fluorophenyl)-1-hydroxyl-4-(dimethylamino)] butylbenzonitrile and the  
method of crystallization thereof. The present invention has disclosed the method to prepare pure  
citalopram and its purified salts through crystallization of the described base; the optical resolution  
method of citalopram diol intermediate, the method to prepare S-citalopram and its purified salts by  
10 crystals mentioned above. The present invention has also disclosed the method to prepare  
citalopram and its purified salts, S-citalopram and its purified salts, as well as pharmaceutical  
formulation thereof obtained. Using methods of the present invention, the quality and yield of the  
product can be significantly improved, and the production cost of the medicinal material can be  
reduced.